Patent claims :

1. The calculating method for determing the dynamic unbalance in rigid rotor of the industrial rotating machine in field balancing, comprising the steps of :
   a. measuring the displacements (magnitudes and directions) for the original vibration vector quntities caused by dynamic unbalance in rotor,at the two bearings ofthe rotating machine without test runs attached with trial masses.
   b. calculating the unbalance centrifugal forces at the two bearings of the rotating machine, based on the equation of motion which are using the data consists of the measured displacements, frequency ratios, damping ratios.
   c. determing the dynamic unbalance of the correction planes of the rotor by transfering the unbalance centrifugal forces at the two bearings of rotating machine to the correction planes of the rotor, with the geometric vector calculation based on the statics which is using with the ratios concerning the relative distance lengths for the bearings of rotating machine and the two correction planes of rotor.

2. The computers, measuring instruments and testing devices, which are directly or indirectly applied or equipped the geometric vector calculating method for determing the dynamic unbalance in rotor, that mentioned in the claim1.

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Amended by K.Tsuji

July 28, 2006

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